

TRECHUS (LASIOTRECHUS) DISCUS FABRICIUS
(CARABIDAE: TRECHINI) IN MICHIGAN¹

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ABSTRACT

The introduced carabid *Trechus discus* Fabr. seems to be actively expanding its range to include much of the Great Lakes region, as documented by recent captures in 7 Michigan counties.

Trechus (Lasiotrechus) discus Fabricius is a distinctive carabid of widespread Palaearctic distribution which has recently become established in North America. In Europe, the species can be found on clayish or peaty soil at water's edge in swamps or streams, and has been repeatedly found in rodent burrows (Jeannel 1928; Lindroth 1963). Pauer (1975) reports pitfall trap captures in agricultural fields near Kiel, West Germany. In addition, it is known to fly to light during warm nights.

In North America, *T. discus* was first taken at light near a swamp at Lanoraie, Quebec, 29.VI.1933 (Chagnon 1934). Subsequently, Lindroth (1963) summarized records for Canada, citing captures from upstate New York as well. Cooper (1976) collected *T. discus* along rivers in Vermont, and reported other captures at black light in New Hampshire.

To date, *Trechus discus* has been collected in black light traps in 6 Michigan counties. The traps, excluding the one in Clinton County, were operated throughout the growing season, with weekly samples inspected for specimens of *T. discus*. Although the habitats surrounding the sites differ considerably, all sites were located within 1 kilometer of more or less permanent water. The occurrence of this species in the light traps provides evidence that it is capable of dispersing from its natural habitat by flight.

One specimen was collected in a pitfall trap in Gratiot County by A. L. Edgar², 24 VII 1975. The trap was located on a low flood plain adjoining the Pine River. *Populus deltoides* Marsh., and *Acer saccharinum* L. are the principal tree species bordering the flood plain. The area adjacent to the river becomes covered with grasses during the growing season. The soil is rich, being deposited by run-off from surrounding farmland. The flood plain is regularly inundated in spring and may flood in summer or fall following heavy rains.

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Habitats suitable for colonization by *Trechus discus* are plentiful in Michigan and adjacent states. The relatively low numbers of individuals trapped in Michigan since 1972 suggest that this species is not present at the same population levels as observed in Europe. However, the widespread occurrence of *T. discus* in lower Michigan coupled with its demonstrable vagility suggests that the species is in the process of expanding its range to include much of the Great Lakes region.

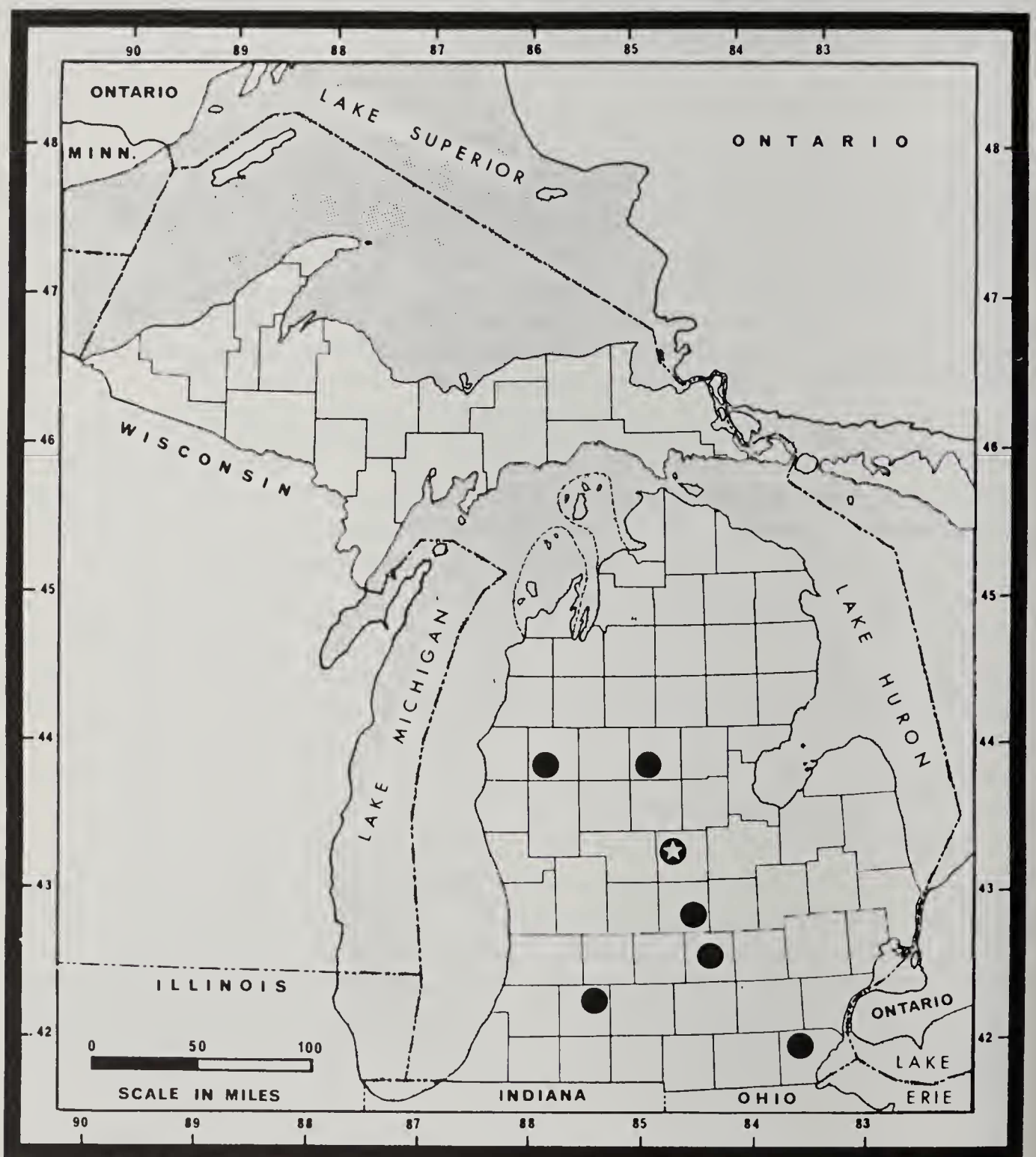


Figure 1. Distribution of *Trechus discus* Fabr. in Michigan: solid dot = capture in black light trap; star = capture in pitfall trap.

MICHIGAN CAPTURE RECORDS

At black light: *Clare Co.*, T17N R4W s.9, 18-28-VII-75 (1 male, 1 female), J. K. Liebherr; *Clinton Co.*, T5N R1W s.23, 20-VII-72 (2 males, 5 females), D. K. Young; *Ingham Co.*, T2N R2W s.13, 19-21-VII-77 (1 female), 1-VIII-77 (3 males, 5 females), R. D. Ward; T3N R1W s.8, 19-22-VI-75 (2 males, 2 females), 23-30-VI-75 (7 males, 10 females), 1-7-VII-75 (2 males, 5 females), R. D. Ward; *Kalamazoo Co.*, T1S R9W s.8, 27-30-VI-77 (1 male), R. D. Ward; *Lake Co.*, T17N R14W s.33, 22-29-VII-76 (1 male), D. L. Flynn, 2-8-VII-77 (1 male, 1 female), J. Mahar; *Monroe Co.*, T6S R8E s.5, 15-VII-75 (1 female), J. K. Liebherr.

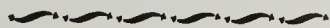
From pitfall trap: *Gratiot Co.*, T11N R3E s.17, 24-VII-75 (1 female), A. L. Edgar.

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LITERATURE NOTICES

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